



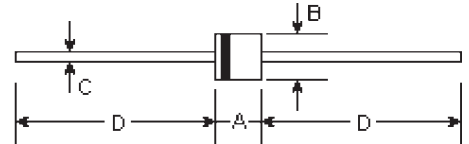
6A05G THRU 6A10G

GLASS PASSIVATED JUNCTION RECTIFIER
Reverse Voltage - 50 to 1000 Volts
Forward Current - 6.0 Amperes

Features

- High surge current capability
- Plastic package has Underwriters Laboratory Flammability classification 94V-0 utilizing Flame retardant epoxy molding compound
- Glass passivated junction in R-6 package
- High current operation 6.0 ampere @ $T_A=75^\circ\text{C}$

R-6



Mechanical Data

- **Case:** Molded plastic, R-6
- **Terminals:** Axial leads, solderable per MIL-STD-202, method 208
- **Polarity:** Color band denotes cathode
- **Mounting Position:** Any
- **Weight:** 0.074 ounce, 2.105 grams

| DIMENSIONS | | | | | Note |
|------------|--------|-------|-------|------|------|
| DIM | inches | | mm | | |
| | Min. | Max. | Min. | Max. | |
| A | 0.339 | 0.358 | 8.6 | 9.1 | |
| B | 0.339 | 0.358 | 8.6 | 9.1 | φ |
| C | 0.047 | 0.052 | 1.2 | 1.3 | φ |
| D | 1.000 | - | 25.40 | - | |

Maximum Ratings and Electrical Characteristics

* @ $T_A=25^\circ\text{C}$ unless otherwise specified. Single phase, half-wave, 60Hz, resistive or inductive load.

| | Symbols | 6A05G | 6A1G | 6A2G | 6A4G | 6A6G | 6A8G | 6A10G | Units |
|---|------------------------------------|-------------|------|------|------|------|------|-------|--------------------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | Volts |
| Maximum DC blocking voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum average forward rectified current at 75°C | $I_{(AV)}$ | 6.0 | | | | | | | Amps |
| Maximum overload surge current at 1 cycle (Note 1) | I_{FSM} | 400.0 | | | | | | | Amps |
| Maximum forward voltage at 6.0A DC | V_F | 1.0 | | | | | | | Volt |
| Maximum full load reverse current, full cycle average at 25°C | I_R | 10 | | | | | | | μA |
| Maximum DC reverse current at rated DC blocking voltage and 100°C | I_R | 500 | | | | | | | μA |
| Typical junction capacitance (Note 2) | C_J | 150.0 | | | | | | | μF |
| Typical thermal resistance (Note 3) | $R_{\theta JA}$ $R_{\theta JL}$ | 20.0 4.0 | | | | | | | $^\circ\text{C/W}$ |
| Operating temperature range | T_J | -55 to +150 | | | | | | | $^\circ\text{C}$ |
| Storage temperature range | T_{STG} | -55 to +175 | | | | | | | $^\circ\text{C}$ |

Notes:

- (1) Peak forward surge current, per 8.3 ms single half sine-wave superimposed on rated load
- (2) Measured at 1.0MHz and applied reverse voltage of 4.0 volts
- (3) Thermal resistance from junction to ambient and from junction to lead at 0.375" (9.5mm) lead length P.C.B. mounted with 1.1X1.1" (30X30mm) copper pads

RATINGS AND CHARACTERISTIC CURVES

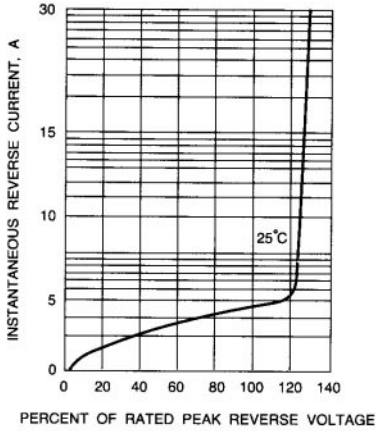
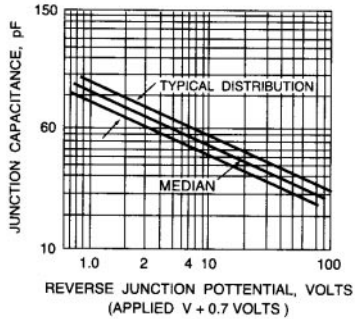


Fig. 1 - TYPICAL REVERSE CHARACTERISTICS



NOTE: WHEN PLOTTING CAPACITANCE VERSUS VOLTAGE IT IS CONVENIENT TO PLOT ON LOG-LOG PAPER AND TO PLOT APPLIED VOLTAGE PLUS BARRIER POTENTIAL (BARRIER POTENTIAL - 0.7 VOLTS) AS THE ABSCISSA. THIS WILL GIVE A STRAIGHT LINE OF SLOPE APPROXIMATELY 1/2 OF WHICH CAN BE EASILY EXTRAPOLATED. CAPACITANCE AT ZERO APPLIED VOLTS IS FOUND AT 0.7 VOLTS ON THE PLOT. THIS TECHNIQUE WAS USED FOR THE CURVE SHOWN.

Fig. 3 - CAPACITANCE CHARACTERISTICS

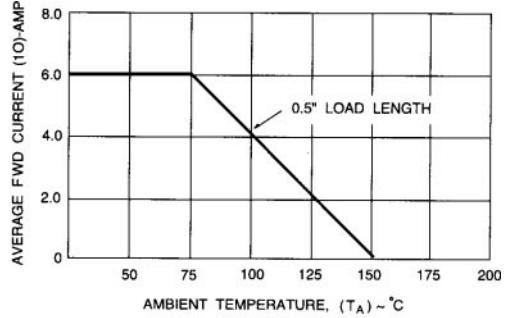


Fig. 2 - FORWARD DERATING CURVE

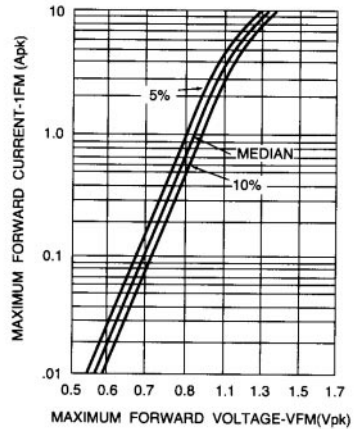


Fig. 4 - TYPICAL FORWARD CHARACTERISTICS

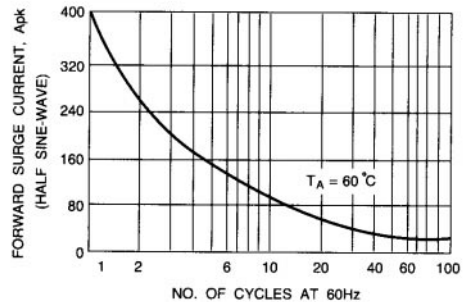


Fig. 5 - MAXIMUM OVERLOAD SURGE CURRENT